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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,895	10/21/2003	Douglas S. Ransom	6270/128	3874

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BRINKS HOFER GILSON & LIONE/PML  
PO BOX 10395  
CHICAGO, IL 60610

EXAMINER
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RODRIGUEZ, PAUL L

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/689,895	<b>Applicant(s)</b> RANSOM ET AL.	
	<b>Examiner</b> Paul L Rodriguez	<b>Art Unit</b> 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/28/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment filed 1/28/05 has been received and considered. Claims 32-64 are presented for examination.

#### ***Drawings***

2. The drawings were received on 1/28/05. These drawings are acceptable for examination.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 700, 812.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The examiner has provided an example of the drawing deficiencies in the above, however, the list of deficiencies may not be all inclusive. Applicant should refer to these as

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examples of deficiencies and should make all the necessary corrections to eliminate the drawing objections.

*Specification*

5. The substitutes specification submitted 1/28/05 has been received and entered in the application.

6. The disclosure is objected to because of the following informalities:

Paragraph 56 line 9 refers to “back end servers 121, 122, 123, 124”, figure 1 has back end servers 120-124.

Paragraph 58 line 8 refers to “IED 102-19”

Paragraph 72 line 1 refers to “power distribution system 301”, previously 300, 301 is load.

Paragraph 112 line 10 states “a transformation 1320 is implemented...” figure 13 labels 1320 as “Incremental data processing”, unclear if this is the same thing.

Paragraph 112 line 11 states “transformation 1330”, again figure 13 labels 1330 as “Incremental data processing”, unclear if this is the same thing.

Paragraph 112 lines 11-12 state “output 1340”, figure 13 labels as “data sink”.

Appropriate correction is required.

7. The examiner has provided a number of examples of the specification deficiencies in the above, however, the list of deficiencies may not be all inclusive. Applicant should refer to these

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as examples of deficiencies and should make all the necessary corrections to eliminate the specification objections.

***Claim Objections***

8. Claim 59 is objected to because of the following informalities:

Claim 59 line 9 recites “said at least on energy management devices”, previously “...device”. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 39 and 58 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no description in the specification regarding “prime number based encryption” or a third and fourth authentication keys.

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12. Claims 53 and 59-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claim 53 recites the limitation "said power management command communicated from said network" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Although the network interface facilitates communications, there was no previous power management command "communicated" from said network.

14. Claim 59 recites the limitation "said portion of said energy distribution system" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. Previously "a portion of said energy distribution network".

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 32-38, 40-57 and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chattopadhyay (U.S. Pub 2002/0103772) in view of Auerbach et al (U.S. Pat 5,673,316).

Chattopadhyay teaches (claim 32, 45) an energy management device (reference number 30) for use in an energy management architecture (figure 1) for managing the flow of energy in an energy distribution system (reference number 20), said energy management architecture comprising a network (reference number 40-60), said energy management device comprising a sensor coupled with said energy distribution system and operative to measure an energy parameter from said energy distribution system (paragraph 23, reference number 32) a processor coupled with said sensor and operative to generate power management data based on said measured energy parameter (paragraph 23), a security module coupled with said processor and operative to encrypt said power management data (paragraph 27, 33) and a network interface coupled with said processor and said network and operative to facilitate communications of said encrypted power management data over said network (paragraph 23-25, 32-34, 54, reference number 34), (claim 33, 46, 51) wherein said energy distribution system comprises an electrical power distribution network (paragraph 21), (claim 36, 43, 57) wherein said power management data is communicated over said network (reference numbers 40-60), (claim 37, 48, 52, 64) wherein said network interface is further operative to wirelessly couple said processor with said network (paragraph 24), (claim 38, 49, 53) wherein said communications of said encrypted

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power management data comprise at least one of electronic mail, HTTP, FTP, telnet, NNTP or XML (paragraph 32), (claim 61) wherein said power management data is received by said at least one energy management device from said network (paragraph 24) and (claim 62) wherein said processor is further operative to generate said power management data (paragraph 23, meter reading). Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Chattopadhyay fails to teach said encrypted power management data comprises first and second portions, said first portion associated with a first decryption key and said second portion, associated with a second decryption key, such that said first portion is capable of being decrypted only with said first decryption key and said second portion is capable of being decrypted with said second decryption key along with the other variations of the encryption and decryption recited in the dependent claims and wherein the communication includes billing data.

Auerbach et al teaches the use of a well known secure cryptographic communications, specifically Pretty Good Privacy, (col. 1 lines 26-36, col. 8 lines 15-25) a security module coupled with said processor (col. 4 lines 3-8, obvious that a software module would be coupled to a processor) and operative to encrypt said management data wherein said encrypted management data comprises first and second portions (reference numbers 203-204), said first portion associated with a first decryption key (reference number 202) and said second portion associated with a second decryption key (reference number 210), such that said first portion is capable of being decrypted only with said first decryption key and said second portion is capable of being decrypted with said second decryption key (claim 1, well known that particular



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encryption key and decryption keys only work together) along with the other variations of the encryption and decryption recited in the dependent claims (obvious variations) and wherein the communication includes billing data (reference number 207, BOM).

Claims not specifically identified are considered to be obvious combinations of the previously recited limitations.

Chattopadhyay and Auerbach et al are analogous art because they are both related to secure communications.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the Pretty Good Privacy with multiple security keys of Auerbach et al in the power management system of Chattopadhyay because Chattopadhyay teaches that any suitable communications protocol may be implemented in combination with one or more generally available security and/or encryption technique to ensure secure private communications of data (paragraph 33) and Auerbach et al teaches creating a cryptographic envelope which can be distributed arbitrarily to any number of users, where only authorized users have access to specific content (col. 2 lines 16-41) and that even if the decryption fingerprinting and watermarking module is compromised, the exposure to the data is limited, a user cannot unlock a part of a document that they have not been authorized to access (col. 7 lines 59-64).

### ***Response to Arguments***

17. Applicant's arguments with respect to claim s 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the IDS, the IDS/PTO-1449 submitted 1/28/05, correlates to the IDS submitted 1/23/04 and the Examiner previously considered the references cited. An initialed copy of the 1449 is provided with this office action.

Regarding the drawing objections, the replacement drawings have corrected most deficiencies however objections remain.

Regarding the substitute specification, which has been entered in the application, most deficiencies have been corrected however objections remain.

Regarding the rejections under 112, while the original claims have been cancelled to overcome the previous rejections, the new claims contain deficiencies and rejections remain.

Regarding the double patenting rejection, the submission of entirely new claims overcomes the rejection and the double patenting rejection is withdrawn.

Regarding the rejection under 103, while the new claims are rejected using the same base reference as the previous claims, applicants arguments are directed to subject matter no longer present in the claims, therefore, the arguments are moot.

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Benson et al (U.S. Pub 2004/0039741) – teaches first and second keys for encryption and decryption, see claims 96 and 104.

Beckwith (U.S. Pat 6,766,143) – teaches IEDs communicating with a security method using authentication and encryption.

Villa et al (U.S. Pat 6,550,012) – teaches the use of Pretty Good Protection cryptography, well known in the art of secure data communications.

Gerszberg et al (U.S. Pat 6,480,748) – discusses that in figure 2, a residential gateway can also connect to utilities devices/energy management facilities and uses an encryption/decryption module for encrypting private communications such as billing and service usage data.

Rahtgen (U.S. Pat 4,882,779) – teaches a security module with first and second keys for secure data communications.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul L Rodriguez whose telephone number is (571) 272-3753.

The examiner can normally be reached on 6:00 - 4:30 T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul L Rodriguez  
Primary Examiner  
Art Unit 2125

PLR  
2/25/05